

## **ABSTRACT**

A computer integrated floor plan system uses a distance measurement device, preferably laser-based, and an angle measurement device, such as a gyroscope, to measure the relative angles between objects. The absolute polar or Cartesian coordinates of each target are not measured in this system. Instead, wall lengths, distances and angles between wall and other building features are measured relative to each other, transmitted to an integrated CAD capable computer, and compared to manually generated walls, openings and other building features previously inputted into the computer by the operator. The use of a laser-based measuring system and error-checking functionality in its integrated CAD software ensures a high level of accuracy, without requiring extensive three-dimensional modeling, or the need for successive point to point measurements as in conventional surveying methods.